

ONTARIO MINISTRY OF ENVIRONMENT



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ONTARIO WATER
RESOURCES COMMISSION

ANNUAL REPORT

1963

BANCROFT WATER & SEWAGE SYSTEMS

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LABORATORY & RESEARCH DEPARTMENT
MINISTRY OF THE ENVIRONMENT

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ANNUAL REPORT

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BANCROFT WATER SYSTEM



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DESCRIPTION OF PROJECT

The water system in the Village of Bancroft consists of a surface water supply obtained from Clarke Lake at an elevation of 1299.00 feet. Since the lake is approximately 230 feet higher than the village proper, a natural water pressure is maintained within the system. Before the water enters the distribution system, it is metered and chlorinated.

OPERATION OF PROJECT

On July 16, 1963, tests were conducted on the water intake pipe to ascertain if a leak existed upstream of the valve chamber near Clarke Lake. Tests indicated a leak existed at the intake and preparatory work was instigated.

On July 31, 1963 a meeting was held in Bancroft between the Division of Plant Operations and the Village Council. At this meeting, it was decided to use funds from the reserve account and to commence work on August 19, 1963.

The pipe between the valve chamber and the lake was excavated. A section of the pipe was replaced and the existing dips taken out of the line. New bedding was also placed around the pipe and then backfilled.

On September 3, 1963 the repair work was tested and the system placed into operation.

The meter in the chlorinator building started to malfunction in approximately August of 1963. Difficulty was experienced in obtaining the replacement parts.

An electrically operated chlorinator was used on a temporary basis until the meter parts were received.

MONTH	TOTAL FLOW (MILL. GALS.)	AVERAGE DAILY FLOW (MILL. GALS.)
JANUARY	2.77	.089
FEBRUARY	2.64	.094
MARCH	2.77	.089
APRIL	2.42	.081
MAY	2.54	.082
JUNE	2.73	.091
JULY	2.86	.092
AUGUST	2.19	.071
SEPTEMBER	1.80	.060
OCTOBER	1.34	.043
NOVEMBER	-	-
DECEMBER	-	-

LABORATORY RESULTS

MONTH	HARDNESS	ALKALINITY	IRON	CHLORIDE	COLOUR	TURBIDITY	BACT.	
	AS CaCo ₃	AS CaCo ₃					RAW	FINAL
JANUARY								
FEBRUARY								
MARCH					5	0.6		
APRIL								
MAY					10	1.1	0	0
JUNE					5	0.7	0	0
JULY	54	34	0.18	0	15	1.0	0	0
AUGUST	46	36	0.27	2	10	1.1	107	0
SEPTEMBER	40	40	0.15	11	10	1.4	4	0
							0	0
OCTOBER	40	32	0.28	1	10	1.3	27	0
							14	0
NOVEMBER			BROKEN IN TRANSIT					
DECEMBER	48	36	0.12	3	15	1.3	2	BROKEN

It can be observed from this table that the hardness is generally below 50 ppm. This is a soft water. Some iron is present in the water, however, it is within tolerable limits. The chloride content is very small. Colour and turbidity are also quite small. It should also be noted that in some instances, the raw water had no coliform organisms.

COSTS

(1) Operating Costs:

Chemical	\$284.59
General Supplies	26.61



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COSTS (Cont'd)

Repairs & Maintenance	\$291.81
Sundry	156.88
TOTAL	<u>\$759.89</u>

The operating costs as stated above were incurred by the OWRC only, the cost incurred by the municipality is not included in this figure since these were not available.

(2) Total Costs:

Debt Retirement	\$ 3,941.00
Interest Charges	11,001.42
Operating Costs	759.89
Reserve Account	1,585.00
TOTAL	<u>\$17,287.31</u>

An amount of \$1,341.27 was in the reserve for contingency account on December 31, 1963.



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BANCROFT SEWAGE SYSTEM

DESIGN CRITERIA

General

Type of Plant	- Septic Tank Treatment
Size	- 42'-0" x 12'-0" x 8'-0" 4020 cubic feet or 25,000 gallons
Chlorine Tank	- 8'-8" x 4'-0" x 5'-0" 175 cubic feet or 1100 gallons

Pump No. 1

Fairbanks-Morse

Model	- 5412K
Capacity	- 200 GPM @ 30 foot T.D.H.
RPM	- 1150
Motor	- Canadian Westinghouse
HP	- 5
Volts	- 208
Phase	- 3

Pump No. 2

Fairbanks-Morse

Model	- 5412K
Capacity	- 200 GPM @ 30 foot T.D.H.
Motor	- Canadian Westinghouse
HP	- 5
Volts	- 208
Phase	- 3

Standby Engine

Make - Wisconsin Engine
Model - AENL
Serial No. - 2914782

DESCRIPTION OF PROJECT

The sanitary sewer system in the Village of Bancroft consists of six and eight inch gravity sewers, one submersible pumping station and a main pumping station located centrally in the village from where the waste is lifted into a sedimentation tank.

The effluent from the sedimentation tank flows into the York River. The effluent is chlorinated from May 15th to October 15th.

OPERATION OF PROJECT

The sewage system operated during 1963 without any serious problems.

The sedimentation tank was pumped out in the beginning of May.

LABORATORY RESULTS

DATE	RAW SEWAGE		FINAL EFFLUENT		COLIFORM COUNT FINAL EFFLUENT
	B.O.D.	S.S.	B.O.D.	S.S.	
June 3					
July 2					35,000,000
July 31	4,800	32,000	88	55	
September 3	4,500	38,000	96	63	210
September 30	4,900	22,000	12	19	
October 31	8,000	55,500	26	33	32,000,000

The B.O.D. and suspended solids in the raw sewage is much higher than an average sewage. This could be due to the fact that samples are taken from the pumping station wet well. The samples taken from the wet well could have obtained some septic sludge. The samples should be obtained from a manhole upstream of the pumping station.

(1) Operating Costs

Chemical	\$ 22.58
Equipment	89.85
Repair & Maintenance	40.00
Sundry	565.04
TOTAL	<u>\$717.47</u>

The sundry item in the operating cost consists of \$70.04 for insurance and \$495.00 for pumping out of the sedimentation tank.

(2) Total Costs

Debt Retirement	\$1,304.00
Interest Charges	3,641.04
Operating Costs	717.47
Reserve Account	<u>673.00</u>
TOTAL	<u>\$6,335.51</u>

On December 31, 1963 there was \$2,179.59 in the reserve contingency fund.

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Division of Plant Operations

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